

REMARKS

The specification and claims have been amended to correct minor clerical errors and to employ more idiomatic English. Independent claims 1 and 14 have been cancelled, claims 2 and 15 have been written in independent form, and the several dependent claims have been amended to depend directly or indirectly from claims 2 and 15. New claims 26 and 27 are supported by the description on page 16, lines 11-14, page 27, line 20 to page 28, line 5 as well as on page 31, lines 10-20 of the specification of the present application. No new matter has been entered.

Before considering the specific art rejections, a brief review of the present invention may be useful. The present invention relates batteries, and more particularly anti-corrosion films for battery lead terminals. As noted at page 16, lines 15-17 of the specification for an anti-corrosion film to exhibit a sufficient anti-corrosion performance, the thickness of the anti-corrosion film is preferably ranged from 50 nanometers to 1000 nanometers. See also page 16, line 19 to page 17, line 2 of the specification which notes for an anti-corrosion film to exhibit a sufficient anti-corrosion performance and also allow easy breaking the anti-corrosion film in a cramping or welding process for electrical connection between the lead terminal and the battery element, the thickness of the anti-corrosion film is preferably ranged from 5 nanometers to 1000 nanometers.

However, an anti-corrosion film causes resistance and prevents conductivity. Thus, if anti-corrosion of the lead terminal of the battery were not a consideration, the absence of the anti-corrosion film would be preferable. However, the absence of the anti-corrosion film is undesirable in view of allowing corrosion of the lead terminal of the battery as well as allowing

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formation of a natural oxide film which prevents the conductivity. Accordingly, one must consider and balance loss of conductivity against corrosion protection.

In view of the short term use and storage, the presence of the extremely thin anti-corrosion film is more preferable in view of obtaining a high conductivity as compared to the absence of any anti-corrosion film. The lower limit of the extremely thin thickness of the anti-corrosion film is 5 nanometers. In view of the middle and long term use and storage, the lower limit for obtaining anti-corrosion is 5 nanometers. The lower limit of the claimed range of the thickness is based on the above points of view.

The upper limit of the claimed range of the thickness is 1000 nanometers which is based in view of avoiding a substantive reduction in conductivity of the lead terminal.

The claimed invention thus is limited to a narrow range of thickness of the anti-corrosion film, and takes a balance of conductivity and anti-corrosion performance and also allows a remarkable improvement in long term reliability of the battery. The above-described technical concept is not disclosed in nor taught by the applied prior art.

The art rejections are respectfully traversed. Considering first the rejection of the claims as obvious from Lindert et al. in view of MacFarlane and Hatazawa et al., the primary reference Lindert et al. has been cited for the general teaching of a composition comprising a polymer reading on those encompassed by Applicants' claims. Even assuming arguendo Lindert et al. is as the Examiner characterizes it, there is no teaching or suggestion within the four corners of Lindert et al. that any of his polymers may be used for protecting the terminals of an electric device (such as a battery) from corrosion as required by Applicants' independent claims 15 and 2, respectively. Rather, Lindert et al. merely teaches a metal treating solution for preparing a metal surface for painting. There is no teaching or suggestion within the four

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corners of Lindert et al. that their disclosed polymer composition, is useful as an anti-corrosion film having a thickness in the range of 5 to 1000 nanometers, in an electric device as claimed in claim 5, or in a battery as required by claim 2.

It is not seen that either of the secondary references supply the missing teachings to Lindert et al. to teach or render obvious claim 15 or any of the claims dependent thereon, or claim 2 or any of the claims dependent thereon. MacFarlane et al. merely teaches an electrical device, in particular, a light emitting device which includes metal leads. And, Hatazawa et al. which has been cited for the general teaching of a battery, seals their leads with an olefin adhesive layer containing a titanate coupling material. Apart from the common touchstone of being a battery, Hatazawa et al. is quite remote.

Moreover, there is no motivation contained within the applied art to combine the art in the manner suggested by the Examiner in order to achieve the present invention. Neither the primary reference Lindert et al. nor the secondary reference MacFarlane et al. are concerned with a fluorine-containing electric device such as a battery. And, while Hatazawa et al. admittedly is concerned with the battery, Hatazawa et al. teaches an entirely different material for sealing the battery leads. Clearly there is no motivation contained within Lindert et al., MacFarlane et al. and Hatazawa et al. to combine the references in the manner suggested by the Examiner. Moreover, combining Lindert et al., MacFarlane et al. and Hatazawa et al. in the manner suggested by the Examiner would be contraindicated by Hatazawa et al. since Hatazawa et al. provide their own solution to sealing leads. Accordingly, it is submitted the Examiner has applied impermissible hindsight, has cherry-picked individual teachings from three disparate references and combined the teachings in a nonprescribed manner to make out a

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case for obviousness. Accordingly, the rejection of the claims as obvious from Lindert et al. in view of MacFarlane et al. and Hatazawa et al. is in error.

Similar comments apply to the rejection of the claims as obvious from Ehara et al. in view of MacFarlane et al. and Hatazawa et al. Ehara et al. which has been cited as teaching protecting metal surfaces with a composition comprising polymers reading on those required by Applicants' claims is no better than Lindert et al. above discussed. Ehara et al. teaches a composition for treating the surface of metallic materials containing aluminum as their predominate constituent for providing corrosion resistance and adhesion to paint. More particularly, Ehara et al. teaches a composition for treating the surface of aluminum cans and the like. As in Lindert et al., there is no disclosure or suggestion contained within the four corners of Ehara et al. that the coating in a thickness in the range of 5 to 1000 nanometers may be useful for coating a lead terminal of an electric device such as a battery for protecting the terminals from corrosion as claimed in Applicant's independent claims 15 and 2, respectively.

The secondary references, i.e., to MacFarlane et al. and Hatazawa et al. alone or in combination fail to supply the missing teachings to Ehara et al. to achieve or render obvious Applicants' claims. The deficiencies of MacFarlane et al. and Hatazawa et al. are discussed above with regard to the rejection based on Lindert et al. as the primary reference. Those comments are incorporated herein by reference. And, it is submitted there is no motivation to combine Ehara et al., MacFarlane et al. and Hatazawa et al. and, in fact, the combination would be contraindicated in view of Hatazawa et al.'s teaching of a different composition for sealing battery leads. Accordingly, the rejection of the claims as obvious from Ehara et al. in view of MacFarlane et al. and Hatazawa et al. also is believed to be in error.

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Accordingly, independent claims 15 and 2 and the several claims directly or indirectly dependent thereon cannot be said to be obvious over the art.

Quite apart from the foregoing, it is noted both Lindert et al. and the PCT equivalent to Ehara et al., the two primary references applied by the U.S. Examiner were cited under category "A", i.e., as merely background art not applied to any of the claims of Applicants' corresponding EP application. (See the EP Search Report forwarded with Applicants' Supplemental IDS under Certificate of Mailing on August 13, 2002). While the U.S. Examiner is not bound by the decisions of an Examiner in another country, the fact that another Examiner has found it inappropriate to apply either reference is indicative of the fact that neither Lindert et al. nor Ehara et al. is particularly relevant to the instant claims.

In view of the foregoing comments and amendments, it is believed that the application is in order for allowance. Early and favorable action are respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



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